

DESCRIPTIONS OF A NEW GENUS AND EIGHT NEW SPECIES AND SUBSPECIES OF AFRICAN MAMMALS

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The new East African mammals herewith described were collected by members of the Smithsonian African Expedition, 1909-1910, and of the Rainey African Expedition, 1911-1912.

SURDISOREX POLULUS, sp. nov.

Type from west side of Mount Kenia, British East Africa, at 10,700 feet altitude. United States National Museum No. 163992, skin and skull of adult male (teeth moderately worn). Collected September 30, 1909, by J. A. Loring. Orig. No. 7562.

Description.—Like *Surdisorex noræ* Thomas, but smaller, with smaller skull and teeth; hind foot larger. Color indistinguishable from that of *S. noræ*. Upper unicuspid teeth all smaller than in *S. noræ*, the first and third especially small and the first conspicuously narrow.

Measurements.—Type, compared with average measurements of seven adults of *S. noræ* from the Aberdare Range, the latter in parentheses: Head and body, 92 (100) mm.; tail vertebræ, 30 (33); hind foot, 17 (15.6). Skull: Condylbasal length, 24.5 (25.2); zygomatic breadth, 6.8 (7.3); breadth of braincase, 12.5 (13.4); mandible, 14.4 (14.6); upper tooth row, entire (alveoli), 10.6 (11.1); lower tooth row, entire (alveoli), 9.6 (10.1).

Specimens examined.—Thirty-five from Mount Kenia. These have been compared with a series of nine specimens of *Surdisorex noræ* from the Aberdare Range. There is in no case any doubt as to which form any specimen in this series belongs. The two lots are readily separated by the characters of the unicuspid teeth.

CERCOCTENUS, gen. nov.

(MACROSCOLIDÆ.)

Type species.—*Petrodromus sultan* Thomas.

Characters.—Like *Petrodromus* but tail thinly haired and with irregular rows of long, stiff, club-like bristles along under side; fingers longer. Skull without the large posterior palatine vacuities,

which in *Petrodromus* extend from near the plane of the anterior border of pm^3 , in palatine plate of maxillæ, to line of center of m^1 in the palatines. Teeth in general as in *Petrodromus*, but pm^1 apparently always a simple hooked cone, without small posterior spikelet as in *Petrodromus*; and pm^3 more complex, deeply grooved on outer side, and distinctly four-cusped.

The forms included in the genus are *Cercoctenus sultan* (Thomas), *Cercoctenus sultan sangi* (Heller), and *Cercoctenus schwanii* (Thomas and Wroughton).

RHINOLOPHUS KENIENSIS, sp. nov.

Type from west side of Mount Kenia, British East Africa, at 7,000 feet altitude. United States National Museum No. 166352, adult male in alcohol with skull removed. Collected August 27, 1909, by Edmund Heller. Orig. No. 1154.

Description.—A small member of the *Rhinolophus augur* group, differing from *R. a. zambesiensis* in the small size of the nose-leaf (greatest width of horse-shoe, 6.8; compared with 8.0-8.3 in *zambesiensis*), shorter forearm, and shorter tibia. Skull somewhat larger, with slightly more robust teeth, than in *zambesiensis*.

Measurements of type.—Forearm, 52 mm.; tibia, 21; greatest length of ear from anterior margin, 18.9; greatest width of ear, 12.2; third finger metacarpal, 34.8; first phalanx, 17.4; fourth metacarpal, 39.5; first phalanx, 11.3; fifth metacarpal, 40.3; first phalanx, 12.8. Skull: Greatest length, 22.8; condylobasal length, 20.4; zygomatic breadth, 12; postorbital constriction, 3; mastoid breadth, 10.7; mandible, 15. Teeth: Canine to m^3 , 8.6; breadth across upper canines, 6.6; greatest breadth across upper last molars, 8.4; lower canine to m_3 , 9.

Remarks.—This new bat is readily separable from all the other species of *Rhinolophus* known from British East Africa by the combination of narrow horse-shoe, hairless sella, and position of small upper premolar entirely without the tooth row. It is doubtless a northern representative of *R. augur*, and perhaps it intergrades directly into *R. a. zambesiensis*. Doctor Lönnberg and Mr. Oldfield Thomas have recorded *R. a. zambesiensis* from Kilimanjaro,¹ but I am not aware that a member of the group has up to now been noted in British East Africa.

Specimen examined.—One, the type.

¹Lönnberg, Wiss. Erg. Schwedischen Zool. Exp. Kilimandjaro, Mamm., pp. 8-10, 1908; Thomas, Ann. and Mag. Nat. Hist., ser. 8, Vol. 11, p. 315, March, 1913.

EPTESICUS UGANDÆ, sp. nov.

Type from Ledgus, Uganda. United States National Museum No. 166520, adult female in alcohol (skull removed). Collected February 15, 1910, by J. Alden Loring. Orig. No. 9022.

Description.—A small brown species related to *Eptesicus capensis somalicus* (Thomas), but with larger, flatter skull. Ears broad, somewhat evenly triangular, with rounded tip; when laid forward reaching to tip of muzzle. Tragus comparatively long, broadest at center, the tip bluntly rounded and not turned forward; inner side nearly straight for two-thirds its length; outer side evenly convex from tip to opposite anterior notch, where there is a small sharp lobe, beneath which is a sharply concave margin and a larger triangular basal lobe, immediately above the outer notch. Wing from base of toes; tail vertebræ entirely within the interfemoral membrane, but a small fleshy tip extending very slightly beyond; postcalcaneal lobe comparatively small, sharply emarginate anteriorly and evenly sloping posteriorly. Hair extending only slightly on to wings but thinly covering the interfemoral membrane to line of ankles and, along tail, to slightly beyond. Color (from alcoholic specimens) apparently much as in *somalicus* but somewhat darker throughout; wings dark grayish brown, faintly lined along posterior edges with buffy; interfemoral membrane slightly lighter than wings. Skull decidedly larger than in *somalicus* (as represented by specimens from the Northern Guaso Nyiro) with relatively and actually broader rostrum and braincase, and relatively much lower sinciput. Upper inner incisors broad and heavy, distinctly bifurcate at tip (except in a much worn specimen); outer upper incisors small, barely reaching beyond cingulum of inner incisors. Lower incisors all trifid, considerably crowded in the row. Check teeth essentially as in *somalicus* but slightly more robust.

Measurements.—Type: Forearm, 29.6 mm.; outer height ear, 12.3; greatest breadth ear, 8.1; tragus from outer notch, 5.4; third finger metacarpal, 26.8; first phalanx, 10.3; fourth finger metacarpal, 27.7; first phalanx, 9.2; fifth finger metacarpal, 28.1; first phalanx, 7.3; tibia and foot, including claws, 16. Skull: Greatest length, 12.8; condylobasal length, 11.8; breadth of braincase, 6.8; depth of braincase, 4.6; mastoid breadth, 7.3; postorbital constriction, 3.5; mandible, 8.8. Teeth: Upper maxillary row, 4.3; breadth across upper canines, 3.9; entire lower row, 5.8.

Remarks.—In addition to other characters, this species may readily be separated from the other small forms of *Eptesicus* known in East

Africa by its dark-colored wing membranes [distinguishing from *temipinnis*, *rendalli*, and *phasma*], short outer upper incisors [distinguishing from *grandidieri*], large, flattened skull, and distinctly bifurcate inner upper incisors [distinguishing from *somalicus*]. In addition to the type there are two topotypes and three other specimens from Gondokoro in the collection.

CHÆREPHON PUMILUS NAIVASHÆ, subsp. nov.

Type from Naivasha Station, British East Africa. United States National Museum No. 166658, male, in alcohol, with skull removed. Collected August 7, 1909, by J. Alden Loring. Orig. No. 6955.

Description.—Like *Chærephon pumilus pumilus* Cretzschmar, but larger, with longer forearm and larger skull; color averaging somewhat darker.

Measurements.—Type, compared with adult male of true *pumilus* from Saaita, Eritrea (number 143166), measurements of the latter in parentheses: Forearm, 42 (38) mm.; skull, condylobasal length, 16.0 (15.4); zygomatic breadth, 10.8 (10.4); interorbital constriction, 4.0 (3.6); mastoid breadth, 9.9 (9.2); mandible, 11.7 (11.8); maxillary tooth row, including canine, 6.3 (6.2); entire lower tooth row, 7.3 (7.0). Average of length of forearm in fifteen adults of *naivashæ*, 40.3; in eighteen adults of *pumilus* from Eritrea, Sudan, and Northern Uganda, 36.5.

GENETTA PUMILA, sp. nov.

Type from Mount Gargues (North Creek, at 6,000 feet), British East Africa. United States National Museum No. 182704, skin and skull of adult male (basal suture closed). Collected September 1, 1911, by Edmund Heller. Orig. No. 4193.

Description.—Like *Genetta stuhlmanni* Matschie, but much smaller, with smaller skull and teeth. Color as in the paler specimens of *stuhlmanni* which approach somewhat the characteristic coloration of *G. erlangeri* Matschie. Ground color of body buff or cream-buff with a grayish tinge; dorsal stripe blackish; large spots along dorsal stripe reddish brown; smaller spots on hips and flanks seal-brown or blackish; outer shoulder stripes, from crown to arms, sharply marked, the three inner stripes to withers much less distinct; crown reddish brown, a narrow stripe of same color extending to the duller brown of nose; sides of face sharply marked by buffy white patch between eye and lips; upper lips whitish; fore and hind feet buffy above, the hind feet dark brown below. Chin and throat grayish buff;

lower neck buffy, sparingly spotted with reddish brown; underparts of body yellowish buff, the middle area spotted with dark brown, the lower belly unspotted. Tail with nine dark bands of reddish brown, those of mid-tail almost chestnut, and eight light bands of buff hairs with darker, pale reddish brown tips. Tip of tail broadly dark blackish brown.

Measurements of type.—Head and body, 380 mm.; tail vertebrae, 355; hind foot, 76; ear, 38. Skull and teeth: Condylbasal length, 75; zygomatic breadth, 38; mastoid breadth, 24.6; interorbital breadth, 10; lachrymal foramen to alveolar point, 23.3; mandible, 51; upper tooth row, including canine, 29.5; upper carnassial, 7.0×4.3 ; lower tooth row, including canine, 32.6.

Remarks.—In a series of fifty specimens of genets of this group from British East Africa this specimen is remarkable for its very small size. Although the animal is an adult male, the skull is much smaller than skulls of considerably younger females of other species, and when compared with male skulls of *stuhmanni* or *erlangeri* of equal age is actually diminutive. There is only a single specimen in the collection. A genet from the neighboring Mount Lololokwi is referred to *Genetta stuhmanni*. It is somewhat younger than the type of *pumila* but has a much larger skull. There will be no difficulty in distinguishing, by size alone, either skins or skulls of this new form from other genets found in the same general region.

MUNGOS SANGUINEUS PARVIPES, subsp. nov.

Type from Kaimosi, British East Africa. United States National Museum No. 182739, skin and skull of adult male (basal and nasal sutures closed). Collected February 5, 1912, by Edmund Heller. Orig. No. 5601.

Description.—Smaller than *Mungos sanguineus ibea* Wroughton and *M. s. proteus* Thomas, with smaller hind foot and skull. Type, in blackish phase, darker, more blackish, than *proteus*; general color dull blackish, indistinctly marked with minute vermiculations of brownish, the sides of neck, sides of body, and middle of tail especially so marked; head, nape, center of back, hands and feet, and terminal third of tail almost pure dull blackish; underfur everywhere brownish black. A specimen in the grizzled phase is much like certain specimens of *M. s. ibea* in like coat, but is generally darker and richer colored, with more ochraceous than in any specimen of *ibea* in the National Museum collections; under side of tail especially brighter ochraceous, the median line scarcely

vermiculated and the black terminal third sharply marked; hands and feet heavily grizzled. Skull like that of *M. s. ibea*, but decidedly smaller; teeth smaller.

Measurements of type.—Compared with adult male of same age (with basal and nasal sutures closed) of *Mungos sanguineus ibea* from Kitanga, British East Africa, measurements of the latter in parentheses: Head and body, 305 (350) mm.; tail vertebræ, 247 (325); hind foot, 54 (67); ear, 24 (—). Skull: Condylbasal length, 61.3 (65.1); zygomatic breadth, 30.9 (33.8); mastoid breadth, 23.2 (24.3); least postorbital constriction, 9.6 (10.9); breadth of rostrum over canine, 10.9 (11.9); length of mandible, 39.3 (42.2); maxillary tooth row, including canine, 21.7 (23.9); lower tooth row, including canine, 24.2 (26.5).

Remarks.—This form needs no special comparison with the Uganda forms described by Wroughton, *M. s. ugandæ* and *M. s. galbus*; both are larger races and both have the hind feet unicolorous ochraceous. Two specimens of the new Kavirondo form are in the collection, the type and an adult male from Lukosa River. The small size of the hind foot and skull readily distinguish them from specimens of the neighboring forms. The adult male skull is about the size of the female skulls of *protcus* and considerably smaller than any female skull in a series of specimens of *ibea*. Matschie has recently named several "species" of mungoses of this group from various localities in East Africa,¹ but none of his descriptions agrees with the specimens on which this new variety is based.

MUNGOS ALBICAUDUS DIALEUCOS, subsp. nov.

Type from Mount Lololokwi, British East Africa. United States National Museum No. 184794, skin and skull of adult male (basal and nasal sutures closed; teeth much worn). Collected September 18, 1911, by Edmund Heller.

Description.—Like *Mungos albicaudus ibeanus* Thomas but lighter colored; more grayish buff and silvery, less brownish buff and blackish. Underfur and long hairs of sides of body especially paler, more silvery gray and very light buff; sides of neck, cheeks, and muzzle grayer. Skull and teeth as in *ibeanus*, the lower molars showing no reduction in size as in the northern form, *Mungos albicaudus leucurus*.

¹Sitz-ber. Ges. Nat. Freunde Berlin, 1914, pp. 435-457. December.

Measurements of type.—Skull: Greatest length, 105 mm.; condylo-basal length, 104; zygomatic breadth, 54; mastoid breadth, 37.1; postorbital constriction, 20.2; breadth of rostrum over canine, 20.3; length of mandible, 69.5. Teeth of type and of a younger adult male from the type locality in which the molars are less worn, measurements of the latter in parentheses: Upper row, including canine, 39.8 (40.8); lower row, including canine, 44.8 (45.8); last lower molar, 7.6×4.2 (7.7×4.5).

Remarks.—This new subspecies of *Mungos albicaudus* is based on three specimens from the type locality and an additional skin from Merelle Water, on the Marsabit Road. These four skins are all lighter colored than any skins of *ibeanus* in the collection, and when placed together the series as a whole is sharply differentiated from a suite of seventeen skins of *ibeanus* collected at points along the Uganda Railroad from Kavirondo to the coast.

HELOGALE UNDULATA AFFINIS, subsp. nov.

Type from summit of Mount Lololokwi, 6,000 feet, British East Africa. United States National Museum No. 182715, skin and skull of adult male (basal and nasal sutures closed). Collected September 2, 1911, by Edmund Heller. Orig. No. 4296.

Description.—Most like *Helogale undulata rufula* Thomas, but smaller, with smaller teeth, and darker and richer colored. Color of whole pelage more heavily suffused with hazel and russet, the feet especially darker (rich dark russet), the underfur everywhere darker, (dark cinnamon brown rather than ochraceous, or tawny brown) and the whole head and neck strongly washed with bright russet, much darker than in *rufula*. Underparts also considerably darker russet, almost "reddish"; a stripe of rich tawny russet along under side of tail to tip. Hands and feet speckled like limbs to near bases of toes; lower hands and toes clear rich dark russet.

Measurements of type.—Head and body, 220 mm.; tail vertebrae, 175; hind foot, 46; ear, 18. Skull: Condylobasal length, 49.7; zygomatic breadth, 29.6; mastoid breadth, 22.8; postorbital constriction, 9.2; breadth of rostrum over canine, 9.5; mandible, 33.8; maxillary tooth row, 16.5; upper carnassial, 3.9×4.0 ; lower molar-premolar row, 14.2.

Specimens examined.—Two from the summit of Mount Lololokwi and four from Rumathe Water, Northern Guaso Nyiro, British East Africa.

Remarks.—This new form differs from *H. atkinsoni* in its rich russet colored face and muzzle, longer tail, larger hind foot, and presence of a conspicuous internal cusp on *pm*³. From *H. macmillani* it is distinguished by longer tail and hind foot, the less finely speckled upperparts, the speckled upper half of the hand and foot, and the conspicuous russet stripe entire length of under side of tail. It needs no special comparison with *Helogale hirtula ahlSELLI* Lönnberg, which is found in the same general region.